ABSTRACT OF THE DISCLOSURE

A differential image for detecting a shape change between one input image and another input image is corrected by setting reference areas which are deemed to have no shape change to the one and another input images $In1(x,y)$ and $In2(x,y)$, respectively, operating average values ave1 and ave2 of pixel values of the reference areas in a reference area average value operating unit, and producing a differential image $S(x,y)$ in accordance with an equation of $S(x,y) = In1(x,y) - In2(x,y) - (ave1 - ave2)$ in a differential image producing unit. Such differential image is displayed with an offset value being applied.